

Claims 1-19 were examined. Claims 1-3, 5-7, and 9-19 were rejected. Claims 4 and 8 were objected to as being dependent upon rejected base claims but would be allowable if rewritten in independent form.

Claims 1, 7, 12 have been amended. Support for the amendments to claims is found throughout the specification. No new matter has been added.

The Applicant respectfully requests entry of the amendments to the claims.

The following remarks are responsive to the Office Action mailed on December 5, 2003.

Rejections Under 35 U.S.C. § 112, Second Paragraph

The Office has rejected claims 1-3, 5-6 under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential elements.

In response, claims 1-3, 5-6 have been amended to clarify the subject matter.

Accordingly, Applicant respectfully requests the reconsideration and withdrawal of the rejections of claims 1-3, 5-6 under 35 U.S.C. § 112.

Double Patenting

The Office has provisionally rejected claims 1, 2, 5, and 6 under doctrine of obviousness-type double patenting over claims 1, 6, 7, 9-11 of copending Application No. 10/188,907. Independent claim 1 of 09/965,542 describes the “tightening link consists of a curved preshaped configuration in which said tightening link **partially extends** around and **compresses against** said body”. The claims of 10/188,907 describe a radial component that completely extends

around the anatomic joint. As such, the claims in Serial No. 09/965,542 are patentably distinct from those in Serial No. 10/188,907.

Rejections Under 35 U.S.C. § 102

The Office has rejected claims 1, 2, 5-7, 9, 11 as allegedly being unpatentable over Cote (305,573).

No support is listed for the rejection of claims 1, 2, 5-7, 9, 11 in the Office Action (Paper No. 6) except for saying that these claims are “clearly anticipated”.

Claims 1, 2, 5-7, 9, 11 have been amended; all amendments are supported by the drawings and specification.

Cote does not show tightening links extending from and integral to the spring links. Cote shows in Figure 1 a separate attachment belt that is bonded to the wires of the brace on a first side and a separate horseshoe, to which the wires are bonded, that secures the device to the body on a second side. Therefore, the Cote device does not describe a unitary device of tightening links and spring links.

Accordingly, Applicant respectfully requests the reconsideration and withdrawal of the rejections of claims 1, 2, 5-7, 9, 11 under 35 U.S.C. § 102.

Rejections Under 35 U.S.C. § 103

The Office has rejected claims 1-3, 5-7, 9-19 as allegedly being unpatentable over Bullock (2,195,024) in view of Davis (4,408,600) and Kelly (1,202,851).

In support of the rejection of claims 1-3, 5-7, 9-19, the Office Action (Paper No. 6) states on page 4:

As for claims 1, 5 and 11, Bullock teaches a super elastic support (not that “superelastic is a relative term) having a tightening link A consists of a curved preshaped configuration, a spring link extending from the tightening link, a covering 1. While Bullock is silent about the material of the elastic cord A, Davis and Kelly teach the use of a super elastic memory alloy having a curved preshaped configuration (figure 14 of Davis, figures 1 & 2 of Kelly). In view of the teaching of Davis or Kelly, it would have been obvious to an ordinary skill in the art at the time the invention was made to use a super elastic memory alloy for the brace of Bullock. The substitution of one material for another well known material in the art in order to provide the desired degree of elasticity or rigidity, is only a matter of obvious engineering choice which does not provide any unobvious result or novelty, and therefore is not patentable over prior art. Note that the superelastic material of Bullock, Kelly and Davis is capable of being “enlarges in respond to...”. As for claims 2, 14, note the loop 2 of Kelly. As for claims 3, 10, note the hinge stop 2 of Bullock. As for claims 6, 9, note locking mechanism 6 of Bullock. As for claim 7, note that Bullock teaches first tightening links A located on both sides of the knee cap (figures 1 & 2) above the knee joint, second tightening links A located on both sides of the knee cap (figures 1 & 2) below the knee joint, and first and second spring links. As for claims 12, 13, Bullock teaches a first tightening link A with a curved between first and second sides (note in figure 2 of Bullock, the curve extending from a first side (at about #7) to a second side above the knee), a second tightening link (beginning at the other side of the knee) with a curved between first and second sides (note in figures 1 and 3 of Bullock, the curve extending from a first side (at about #7) to a second side above the knee, around the back of the leg to the other side of and above the knee), locking mechanism 6, 1, 8, C, 7, and stiffening means 2 & B. As for claim 13, note that the radius of curvature of one side of the thigh is different from the radius of curvature of the other side of the thigh. As for claim 15, note the 2 spring links on both sides of the kneecap. As for claim 16, stiffening means 2 & B is capable of adjusting the vertical separation of the first and second tightening links (note that claim is only a functional statement of intended use without any further positive limitation of structure). As for claim 17, note hinge structure at reference #2 of figure 2 of Bullock. As for claim 19, note the wire of Davis and Kelly.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2143.

As described above Bullock describes a device incorporating multiple distinct components including two brace halves united at a pivoting mechanism and an elastic cord that when placed into tension urges a separate pad against the knee.

The invention herein described in amended claims 1-3, 5-7, 9-19 consists of a unitary support that contains tightening and spring links integrated together to attach the device to the body and define an inherent hinge at the deflection area of the joint using a single support component. Bullock incorporates a separate stabilizing wire to a brace that incorporates a pivoting mechanism as opposed to an integrated hinge. Kelly describes a spring that is connected to separate components that hold the device against the legs and shoulders. Davis also describes a spring that is attached to separate components used to attach the ski boot to the leg and to the foot. As such these devices are not unitary and don't incorporate a tightening link integral to the spring link, and fabricating such a device from a unitary component is not obvious. As such, claims 1-3, 5-7, 9-19, as amended, are patentable over Bullock in view of Davis or Kelly for at least the reasons above.

Therefore, any teaching is clearly lacking from these references to combine them; in fact, these references clearly teach away from combining. "There must be a teaching or suggestion within the prior art, or within the general knowledge of a person of ordinary skill in the field of the invention, to look to particular sources of information, to select particular elements, and to combine them in the way they were combined by the inventor". *ATD Corp. v. Lydall, Inc.*, 158 F.3d 534, 48 USPQ2d 1321 (Fed. Cir. 1998). In the present case, there isn't suggestion to combine the elements in the manner as recited by the claims.

Furthermore, the statements of obviousness are simply inadequate, particularly in light of the submission that Bullock requires a separate component to define a pivoting hinge for the device and only uses the separate wire to hold the knee pad in place. Taking these multiple component devices and combining into the unitary device in this application is adequate. The suggestion, teaching, or motivation to combine prior teachings "must be clear and particular

Broad conclusory statements regarding the teaching of multiple references, standing alone, are not ‘evidence’”. *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999).

Moreover, “[t]he fact that a prior art device could be modified so as to produce the claimed device is not a basis for an obviousness rejection unless the prior art suggested the desirability of such a modification.” *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). In the present case, there is no suggestion as to the desirability of such modifications as suggested by the Office Action.

Accordingly, Applicant respectfully requests the reconsideration and withdrawal of the rejections of claims 1-3, 5-7, 9-19 under 35 U.S.C. § 103.

The Office has rejected claim 18 as allegedly being unpatentable over Bullock in view of Davis, Kelly, and further in view of Greenfield (5,261,871).

In support of the rejection of claim 18 the Office Action (Paper No. 6) states on page 5:

Greenfield teaches the use of nickel titanium material for a brace. In view of the teachings of Greenfield and Davis and Kelly (note the comments above relative to the teachings of Bullock, Davis, and Kelly), it would have been obvious to an ordinary skill in the art at the time of the invention was made to use nickel titanium material for the elastic cord A of Bullock..

The invention herein in claim 18 describes a unitary support consisting of tightening links to attach the support to the body integrated with spring links having integrated hinges to define the movement of the joint.

Claim 18, as amended, is patentable over Bullock in view of Davis, Kelly, and Greenfield for at least the reasons described above.

Accordingly, Applicant respectfully requests the reconsideration and withdrawal of the rejections of claim 18 under 35 U.S.C. § 103(a).

The Office has rejected claims 1, 2, 5 as allegedly being unpatentable over Kelly.

In support of the rejection of claims 1, 2, 5 the Office Action (Paper No. 6) states on page 6:

Kelly shows every claimed feature of claims 1, 2, 5 except for the recited covering. The provision of a means to cover a brace member for the purpose of providing comfort for a user is well known in the art, and does not provide any unobvious result or novelty, and therefore is not patentable over prior art. Note that it would have been obvious to an ordinary skill in the art at the time the invention was made to leave out the coupling members 4, 11, and make the bar 1 a unitary bar consisting of one tightening link and one spring link, if the need for sizing or height adjustment is not desired.

The invention herein in claims 1, 2, 5 describe a unitary support consisting of tightening links to attach the support to the body integrated with spring links having integrated hinges to define the movement of the joint. This unitary support transfers forces between the integrated spring links and tightening links unlike conventional braces and those like Kelly which involving multiple support components attached together. The attachment means for Kelly and other such braces involving multiple support components are rigid and interfere with the transfer of deflection forces.

Independent claim 1, as amended, are patentable over Kelly for at least the reasons above. Dependent claims 2, 5 ultimately depend from independent claim 1 and are therefore patentable for at least the same reasons.

Accordingly, Applicant respectfully requests the reconsideration and withdrawal of the rejections of claims 1, 2, 5 under 35 U.S.C. § 103(a).

The Office has rejected claims 1, 2, 5, 6 allegedly being unpatentable over Davis.

In support of the rejection of claims 1, 2, 5, 6 the Office Action (Paper No. 6) states on page 6:

Davis shows every claimed feature of the claims (figure 14) except for a covering. The provision of a means to cover a brace member for the purpose of providing comfort for a user is well known in the art, and does not provide any unobvious result or novelty, and therefore is not patentable over prior art. As for claim 2, official notice is taken that the provision of loop for a spring link is very well-known in the art and therefore is not patentable over prior art.

Independent claim 1, as amended, is patentable over Davis for at least the reasons above.

Dependent claims 2, 5, 6 ultimately depend from independent claim 1 and are therefore patentable for at least the same reasons.

Accordingly, Applicant respectfully requests the reconsideration and withdrawal of the rejections of claims 1, 2, 5, 6 under 35 U.S.C. § 103(a).

CONCLUSION

Applicants have, by way of the amendments and remarks presented herein, made a sincere effort to overcome rejections and address all issues that were raised in the outstanding Office Action. Accordingly, reconsideration and allowance of the pending claims are respectfully requested. If it is determined that a telephone conversation would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

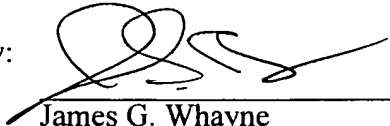
In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that additional extensions and/or other relief is required, Applicant petitions for any required relief including extensions of time and authorizes the Assistant

Commissioner to notify the undersigned as to the cost of such petitions and/or other fees due in connection with the filing of this document so such fees can be promptly.

Respectfully submitted,

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